

REMARKS

The Office Action dated July 11, 2005, has been noted and its contents carefully studied.

In light of the following remarks, reconsideration of the rejection is courteously requested.

Turning briefly to the invention as recited in the claims, in one aspect, as per Claim 1, the invention is directed to a refrigerator. The refrigerator includes a housing surrounding at least one interior space. A low temperature generator serves to cool the interior space. A control device is provided for receiving a target value signal and controlling a temperature of the interior space to a target temperature represented by a target value signal, by controlling operation of the low temperature generator. A control element sends the target value signal to the control device with a level varying according to a prescribed course.

In a more specific aspect such as recited in Claim 4, the prescribed course includes a number of steps, each with a constant level during that step. The mean rate of the change of the target temperature can be specified by a user through an operating element that is associated with the control element (Claim 6). In a further and more specific aspect as recited in Claim 12, the refrigerator includes both the low temperature generator and a heating temperature generator coupled to both of the interior spaces, with only one of the low temperature generator and the heating temperature generator operationally coupled to the first and second interior spaces at one time.

It is respectfully urged that the invention as recited in the claims is not obvious from the cited references under 35 USC §103 as will become more clearly evident from the following detailed discussion of the references, presented herein for the Examiner's kind consideration.

However, prior to presenting a discussion of the references in relation to the claims, a brief discussion of the law of obviousness under 35 USC §103 as applied by the courts is presented herein, to enable the Examiner to understand why the proposed combination of evidence of references does not render Applicants' invention obvious and that the rejection is contrary to established law.

Using the language of the statute, the legal question is: Are the differences between the subject matter sought to be patented and the prior art such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains? More specifically, are the differences between the claimed invention and the prior art such that the claimed invention as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the claimed invention pertains? In answering the foregoing questions, the Examiner must avoid the use of hindsight. *Khan v. General Motors Corp.*, 135 Fed.3rd, 1472, 1479, 45 U.S.P.Q. 2nd 1608 (Fed.Cir.), cert. denied 525, US8 75 (1998).

Examining the specific differences between the prior art and the claims as issued may help to determine whether the claimed invention would have been obvious to a hypothetical person with ordinary skill in the pertinent art. On the other hand, examining only these differences, however, can mislead the decision maker into believing that the differences are the invention. *Jones v. Hardee*, 727 Fed. 2nd, 1524, 220 U.S.P.Q. 1021 (Fed. Cir. 1984). Among the factors that may be considered when determining the level of ordinary skill in the pertinent art are:

1. The types of problems encountered in the art;
2. The prior art solutions to those problems;

3. The rapidity with which innovations are made;
4. The sophistication of the technology;
5. The educational level of the inventor, and
6. The educational level of active workers in the field.

See generally *Environmental Designs v. Union Oil Co. of Cal.*, 713 Fed. 2nd 693, 218 U.S.P.Q. 865 (Fed. Cir. 1983), cert. denied 464 US 1043, 224 U.S.P.Q. 520 (1984).

As already explained, one danger that can arise when modifying or combining prior art is the use of hindsight reconstruction, i.e., allowing the invention under review to act as a template for modifying a piece of prior art or for piecing together teachings contained in separate pieces of prior art. *Yamanouchi Pharm. v. Danbury Pharmacol*, 231 F3rd 1339, 1343-45, 56 U.S.P.Q. 2nd 1641 (Fed.Cir.2000). It is wrong to use what the inventor alone taught against its teacher. *W.L. Gore & Assocs., Inc. v. Garlock, Inc.* 721 Fed. 2nd 1540, 1553, 220 U.S.P.Q. 303 (Fed. Cir. 1983) cert. denied 469 US 851 (1984). In order to avoid hindsight reconstruction, case law requires that before prior art that has been modified or combined as taught by the claimed invention can be used as evidence of obviousness, there must be evidence of a motivation, suggestion or teaching to so modify or combine the prior art. *Beckson Marine, Inc. v. NFM, Inc.* 292 Fed.3rd 718, 727-28, 63 U.S.P.Q. 2nd 1031 (Fed. Cir. 2002). There must be clear-and-particular actual evidence of a motivation, teaching, or suggestion to modify or combine prior art. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3rd 1313, 1334, 63 U.S.P.Q. 2nd 1374 (Fed. Cir. 2002).

If the law is applied properly in the manner discussed, it becomes immediately apparent that the proposed combination of references does not render Applicants' invention obvious.

This will become more clearly evident from the following detailed discussion of the references.

U.S. Patent No. 5,343,712 to Gowan

U.S. Patent No. 5,343,712 to Gowan (hereinafter "Gowan") discloses a temperature controller for facilitating the storage of wine and like perishables in a household refrigeration unit. More specifically, Gowan provides a temperature controller for a refrigerator for converting an ordinary household refrigerator unit into a unit for storing wine and like perishables for extended periods of time (column 2, lines 61-63).

Gowan recognizes that conventional refrigerators do not provide the desired temperature conditions for wine, and more particular to a wine storage temperature of about 55°F, plus or minus 5°F (column 1, lines 13-31). The temperature controller 10 of Gowan includes a housing 20, means 22 for sensing a temperature of the chilled compartment of the refrigerator 16 and means 24 operatively connected to the temperature sensing means 22 for overriding the thermostat control of the chiller 14 (column 5, lines 17-21). During cooling intervals, the temperature of the chilled compartment is lowered to a user-selected temperature in stages (column 6, lines 17-20). Thus, in operation, the controller does not enable the continuous supply of electrical power to the chiller when the temperature of the chilled compartment is above a first pre-selected temperature, but instead enables and disables the supply of electrical power during each of a plurality of consecutive cooling intervals while the temperature of the chilled compartment is being lowered to the first pre-selected temperature (column 3, lines 34-42).

In contrast, Applicants' invention is directed to a refrigerator, which includes a housing surrounding at least

one interior space. There is no separate control unit provided to override the normal operation of the originally installed control device for the refrigerator. A low temperature generator for cooling the interior space is provided in a combination with control device for normal operation of the refrigerator, without a separate control device overriding control thereof. This arrangement serves to receive a target value signal at the control device and for controlling a temperature of the interior space to a target temperature represented by the target value signal. This is done through the control device controlling operation of the low temperature generator. A control element serves to send the target value signal to the control device with a level varying according to a prescribed course.

In addition to providing a much more complicated arrangement to modify an existing refrigerator which still fails to teach or suggest Applicants' claimed invention, Gowan fails to provide any teaching or suggestion of a control element sending a target value signal to the control device with a level varying according to a prescribed course.

Yet still further, as provided in Claim 4, Gowan fails to teach or suggest the prescribed course as including a number of steps, each with a constant level during that step. Yet still further, there is nothing in Gowan that teaches or suggests an operating element associated with the control element for permitting a user to specify a mean range of change of the target temperature during the prescribed source. With respect to new Claim 12, Gowan clearly fails to teach or suggest a low temperature generator combined with a heating temperature generator, with both coupled to the interior space, and with only one of the low temperature generator and heating temperature generator operationally coupled to the first and second interior spaces at one time.

In this context, it is also noted that the Examiner has applied the hereinafter to be discussed Brimer reference to modify Gowan to attempt to arrive at a hindsight reconstruction of the claimed invention, with no suggestion or motivation in either Gowan or Brimer to combine the teachings. Moreover, even if such teachings are combined, the combination would still fail to render obvious Applicants' claimed invention under the properly applied law as discussed previously.

U.S. Patent No. 4,784,212 to Brimer et al.

U.S. Patent No. 4,784,212 to Brimer et al. (hereinafter "Brimer") teaches a microprocessor-based perimeter thermal energy control system regulating heating and cooling in the perimeter area of a building in accordance with instantaneous and integrated heat flow measurements and instantaneous temperature deviation measurements. The gain of the heat flow based control system is varied automatically as a function of the deviation between the actual space temperature and a desired set point temperature. This is not a prescribed course and instead is a randomly varying course depending on how instantaneous integrated heat flow measurements and instantaneous temperature and deviation measurements occur. Thus, even if the teachings of Brimer were applied to those of Gowan, they would still fail to render obvious Applicants' claimed invention.

Moreover, it is respectfully urged that there is no suggestion in the teachings of the two references to arrive at Applicants' claimed invention. To facilitate the Examiner's consideration of this assertion, attached are copies of a web page from "thewinedoctor.com", Exhibit A. Temperature control for a wine environment for a refrigerator is quite different from temperature control for a building where humans reside.

Thus, one would not look to the teaching in the art of HVAC to modify a refrigerator. As discussed in the attached web pages, it is well recognized that today's modern, centrally-heated homes are not at all conducive to wine storage. In fact, it is acknowledged that today's HVAC systems for homes are rapidly lethal when it comes to wine. Thus, there is no motivation or suggestion to apply the teachings of a building control system such as that of Brimer to a system such as that of Gowan.

Moreover, even if applied, the combination still fails to render obvious the claimed invention. In Brimer, a control unit receives signals from a heat flow sensor and a temperature sensor. After storing a predetermined preset temperature for a building space, the temperature of the space is measured by the temperature sensor and instantaneous temperature signals are entered into the data memory. In addition, the magnitude and direction of heat flow through an envelope is measured over an extended period of time and heat flow signals are stored in the data memory over an extended period of time. The instantaneous heat flow signals are summed to produce control signals having a magnitude and signs representative of the net magnitudes and directions of the summations of the instantaneous heat flow signals. The gain of the output signals is varied in accordance with the temperature deviation signals so that gain increases and decreases in proportion to increases and decreases in the magnitudes of the temperature deviation signals.

This is not a prescribed course as provided by the control element in Applicants' claimed invention as reflected in Claim 1. Instead, it is a course that is quite randomly variable depending on the ambient conditions outside the building as well as on its dependence on how well the building

is insulated and what heat loss or cooling losses occur due, for example, to gaps in insulation, etc.

Moreover, other features, such as those of Claims 4 and 6, as well as Claim 12 which provides both a low temperature regenerator and a heating temperature generator for a refrigerator, with only one coupled to the first and second interior space at one time, is clearly not taught or suggested by the proposed combination of Gowan and Brimer.

Thus, not only is there no suggestion, teaching or motivation to combine the teachings of the two references cited, but even if combined, it is clear that the combination would still fail to render obvious Applicants' claimed invention.

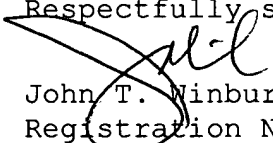
For the foregoing reasons, it is respectfully urged that all of the claims are clearly allowable and not obvious from the cited references.

If the Examiner has any questions or further objections regarding the claims, the Examiner is requested to contact the undersigned.

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Name of Attorney Signing

Respectfully submitted


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